

# Asphalt Paving Regulation Stakeholder Meeting

**DRAFT SLIDES for SIP Steering  
4-29-08**

**May 1, 2008**

**Massachusetts Department of Environmental Protection**

# Purpose of meeting

- To advise stakeholders that MassDEP's will propose revisions to its asphalt paving regulations
- To explain why we will propose revisions to further regulate the content of asphalt paving materials
- To get feedback from stakeholders (local governments, asphalt producers, etc.)
- To identify issues and questions for resolution, prior to issuance of a draft regulation

# Background

- MA does not meet the federal standard for ozone adopted in 1997
- As an ozone “nonattainment” area, MA submitted a plan (SIP) to U.S. EPA showing how it plans to meet the ozone standard in 2009 and subsequent years
- MA Ozone SIP includes a commitment to propose amendments to MassDEP’s asphalt paving regulation in order to reduce emissions from paving materials

# Background

- MA developed its ozone SIP with the 13-state Ozone Transport Commission (OTC), which plans for ozone attainment in the OTC region
- OTC states identified sources of volatile organic compound (VOC) and nitrogen oxide (NO<sub>x</sub>) emissions
- Analyzed the potential for further emission controls after 20+ years of ozone control strategies in OTC region

# Background

- Recommended that all OTC states adopt stricter controls of VOCs or NO<sub>x</sub> emitted from:
  - Consumer products, paints and other coatings, adhesives and sealants, large boilers, glass furnaces, cement kilns, asphalt production (batching) plants
  - Asphalt paving

# Background - Terminology

- Asphalt paving is used to pave, seal and repair surfaces such as roads, parking lots, and walkways
- Asphalt paving is grouped into three general categories:
  - hotmix
  - cutback
  - emulsified

# Hot-mix/ Asphalt Production

- Hot-mix asphalt, the most commonly used paving asphalt, produces minimal VOC emissions
- MassDEP does not regulate the *content* of hot-mix asphalt and is not proposing to do so
- Emissions from fuel combustion at asphalt production (“batching”) plants that make hot-mix are regulated under NOx regulations
- MassDEP is NOT proposing to further regulate asphalt production plants

# Cutback and Emulsified Asphalt

- Cutback asphalt: prepared by blending asphalt cement with a diluent, typically from 25 to 45 percent by volume of petroleum distillates.
- Emulsified asphalt is a lower emitting alternative to cutback asphalt; use a blend of asphalt cement, water and an emulsifying agent, such as soap. Some emulsified asphalts may contain virtually no VOCs; others may contain up to 12% VOC by volume.



# Background

- 1977 - EPA published a Control Technology Guideline (CTG) for cutback asphalt
- Recommended replacing cutback asphalt binders with emulsified asphalt during the ozone season
- 1979 - EPA added a specification for emulsified asphalt to the CTG recommendations to limit the content of oil distillate in emulsified asphalt to no higher than 7 percent oil distillate

# MassDEP Existing 310 CMR 7.18(9)

➤ **Effective Date**

- 1982

➤ **Control Period**

- Ozone-season (May 1 – September 30)

➤ **Cutback Asphalt** (does not address emulsified)

- Bans all uses of asphalt in ozone season except:
  - Use of cutback asphalt as a penetrating prime coat;
  - Storage or stockpiling of patching mixes used in pavement maintenance for a period greater than one month; and,
  - Use of cutback asphalt of which less than 5% by weight of the total solvent evaporates at a temperature up to and including 500°F as determined by ASTM Method D402, “Distillation of Cutback Asphalt Products.”

# OTC Recommendation

## ➤ **Control Period**

- Ozone-season: May 1 – September 30

## ➤ **Cutback Asphalt**

- Ban all use during ozone season

## ➤ **Emulsified Asphalt**

- Standard: Regardless of application, use only emulsified asphalt that contains not more than 0.5 ml VOC from a 200 ml of sample (per ASTM Test Method D244) (equivalent to 0.25% VOC)